Amendments to the Claims

Please cancel Claim 2. Please amend Claims 1, 3, 13 and 21. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1. (currently amended) A crosspoint switch comprising:

a plurality of input buses, signals on the input buses being driven at low swing;

a plurality of output buses, signals on the output buses being driven at low swing; and

a plurality of crosspoints, each comprising an amplifier and selectively passing a signal from a low swing input bus to a low swing output bus.

2. (canceled)

3. (currently amended) A crosspoint switch as claimed in claim [[2]] 3 wherein each crosspoint comprises a low swing driver circuit.

4. (original) A crosspoint switch as claimed in claim 3 wherein the amplifier is a clocked regenerative amplifier.

5. (previously presented) A crosspoint switch as claimed in claim 4 further comprising a timing circuit which controls timing of the crosspoint switch from a clock, the timing circuit including a delay, the timing of which tracks timing variations in the driver circuit.

6. (original) A crosspoint switch as claimed in claim 3 wherein the signals on the input buses and the output buses are differential signals.

7. (original) A crosspoint switch as claimed in claim 6 wherein low swing drivers which drive the input buses and the low swing drivers at the crosspoints are push-pull driver circuits, each of which drives a pair of differential lines, one line driven high while the other line is pulled low.

8. (original) A crosspoint switch as claimed in claim 1 further comprising a plurality of amplifiers which amplify the signals on the output buses, the amplifiers being clocked regenerative amplifiers.

9. (original) A crosspoint switch as claimed in claim 8 wherein the signals on the input buses and the output buses are differential signals.

10. (original) A crosspoint switch comprising:

a plurality of input buses;

a plurality of low swing drivers which drive signals to the input buses, each low swing driver driving a pair of differential lines, one line driven high while the other line is pulled low;

a plurality of output buses;

a plurality of crosspoints, each selectively passing a signal from an input bus to an output bus, each crosspoint comprising an amplifier which amplifies a signal on an input bus and a low swing driver which drives a low swing signal on an output bus; and

a plurality of output amplifiers which sense the signals on the output buses.

11. (previously presented) A crosspoint switch as claimed in claim 10 further comprising a timing circuit which controls timing of the crosspoint switch from a clock, the timing circuit including a delay, the timing of which tracks timing variations in the driver circuit.

12. (original) A crosspoint switch as claimed in claim 11 wherein the amplifier is a clocked regenerative amplifier.

13. (currently amended) A method of connecting signals from a plurality of input buses to a plurality of output buses comprising:

driving signals on the input buses with a low swing;

at crosspoints between the input buses and output buses sensing and amplifying signals on the input buses and driving signals on the output buses at low swing; and

sensing the low swing signals on the output buses.

14. (original) A method as claimed in claim 13 wherein the signals are sensed by a clocked regenerative amplifier.

15. (original) A method as claimed in claim 14 further comprising controlling timing of the crosspoint switch from a clock through a timing circuit including a delay, the timing of which varies in a manner similar to timing variations in driver circuits which drive the signals.

16. (original) A method as claimed in claim 13 wherein the signals on the input buses and the output buses are differential signals.

17. (original) A method as claimed in claim 16 wherein the signals on the input buses and the output buses are driven by push-pull driver circuits, each of which drives a pair of differential lines, one line driven high while the other line is pulled low.

18. (original) A method as claimed in claim 13 further comprising amplifying the signals on the output buses in amplifiers, the amplifiers being clocked regenerative amplifiers.

19. (original) A method as claimed in claim 18 wherein the signals on the input buses and the output buses are differential signals.

20. (original) A method of connecting signals from a plurality of input buses to a plurality of output buses comprising:

driving signals on the input buses through a plurality of low swing drivers, each low swing driver driving a pair of differential lines, one line driven high while the other line is pulled low;

at a plurality of crosspoints, sensing signals from the input buses with amplifiers which amplify signals on the input buses, and driving signals on the output buses with low swing drivers; and

sensing the low swing signals on the output buses with output amplifiers.

21. (currently amended) A crosspoint switch comprising:

means for driving a plurality of low swing signals on a plurality of input buses;

a plurality of crosspoint means for sensing and amplifying and amplifying signals from the input buses and driving low swing signals on a plurality of output buses.

22. (previously presented) A crosspoint switch as claimed in claim 1 wherein the input buses and the output buses are differential data lines, and further comprising data-line-to-data-line precharge circuits that share charge between the data lines to a midpoint of voltage swing on the data lines.

23. (previously presented) A method as claimed in claim 13 wherein the input buses and the output buses are differential data lines, and further comprising precharging the differential buses through a data-line-to-data-line precharge circuit that shares charge between the data lines to a midpoint of voltage swing on the data lines.